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EXAMINER

PIAZZA CORCORAN, GLADYS JOSEFINA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/05/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

clo 8

Office Action Summary

Application No.

09/995,876

Applicant(s)

LIAW, JEFFREY

Examiner

Gladys J Piazza Corcoran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 4, 16-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Species A in Paper No. 7 is acknowledged.
2. Claims 4, 16-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups II and III, Species B, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-3, 5-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 1 is unclear by reciting in the preamble that the sealing washer is secured to one surface and a fastener is welded to second surface while reciting in the body of the claim that the sealing washer is secured to the second surface and the fastener is bonded to a first surface. It is suggested to amend the preamble, line 2 to recite -- welding a fastener to another surface of a metal sheet--.
6. Claim 1 is unclear by reciting that a fastener is welded in the preamble while only reciting that the fastener is bonded in the body of the claim.

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7. Claim 1 recites the limitation "the first surface" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to amend to --a first surface--.
8. Claim 1 recites the limitation "the sheet" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to amend to --the metal sheet--.
9. Claim 1 recites the limitation "the second surface" in lines 5, 6, and 7. There is insufficient antecedent basis for this limitation in the claim. It is suggested to amend to -
-a second surface-- in line 5.
10. Claim 1 is unclear in lines 6 and 7 by reciting "urging a sealing washer into the second surface while so heated to heat the sealing washer and thereby bond the sealing washer to the second surface". It is suggested to amend to --urging a sealing washer onto a second surface while still heated from the fastener bonding step thus heating the sealing washer and thereby bonding the sealing washer to the second surface--.
11. Claim 2 is unclear by reciting that "the head of the fastener being bonded to a second surface of the metal sheet" and "the washer being bonded to the second surface" while claim 1 recites that the fastener is bonded to a first surface of the metal sheet. It is suggested to amend claim 2 to recite that -- the head of the fastener being bonded to a first surface of the metal sheet--.

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12. Claim 7 recites the limitation "the sealing member" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested to amend to -the sealing washer--.

13. Claim 8 lines 3-4 are unclear. It is suggested to amend to --the holder to a socket end having a depth less than the thickness of the washer when uncompressed, with the face contacting--.

14. Claim 9, line 5 is unclear. It is suggested to amend to --and thereby urges the washer onto--.

15. Claim 10, line 7 is unclear. It is suggested to amend to --onto the second surface--.

16. Claim 11 is unclear by reciting "relative to when the first surface is heated". There is no recitation in the claims that the first surface is heated, it is suggested to amend the claim to recite a heating step of the first surface or to amend claim 11 to --relative to when the second surface is heated--.

17. Claim 13 is unclear by reciting the head is compressed onto the second surface while the claim 1 recites bonding the fastener to the first surface, it is suggested to change "the second surface" in lines 1, 3 of claim 13 to --the first surface--.

18. Claim 13 is unclear by reciting the washer is urged and bonded to the first surface while the claim 1 recites bonding the washer to the second surface, it is suggested to change "the first surface" in lines 3, 4, 5, and 6 of claim 13 to --the second surface--.

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19. Claim 14, line 6 is unclear. It is suggested to amend to --urged onto the second surface--.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 1-3, 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in view of Hartley (US Patent No. 2,512,426).

The Admitted Prior Art discloses it is known to secure a fastener (metal stud) to a plate of metal by welding the head of the stud to a surface of the plate (page 1).

Subsequently a sealing washer is secured to the opposite surface of the metal sheet through induction heating and pressure (page 2).

Hartley discloses it is known in the art to secure a sealing washer (5) and a fastener such as a stud or bolt (10) to a sheet by bonding the fastener to a first surface of the sheet by a process which to achieve such bonding heats the second surface of the sheet proximate to the fastener and urging a sealing washer onto the second surface while so heated to heat the sealing washer and bond the sealing washer to the second surface all in one step in order to reduce manufacturing steps and produce the finished product quickly (column 1, lines 29-37; column 4, lines 55-75). It would have been obvious to one of ordinary skill in the art at the time of the invention to secure a

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fastener and a sealing washer to a metal sheet as shown in the Admitted Prior Art by the bonding process of the fastener to the metal sheet additionally heating the surface for bonding the sealing washer all in one step as shown by Hartley in order to reduce manufacturing steps.

As to claim 2, the fastener has a head and is bonded to the metal sheet about an opening and the washer is bonded to the other surface of the sheet about the opening. As to claim 3, the fastener is a stud with a shank extending from the head through the opening and the sheet. As to claim 5, the stud is bonded to the sheet by welding. As to the method of bonding by soldering or brazing, these are considered well known equivalent alternatives in the art to welding and is only dependent upon the particular materials used. Only the expected results would be attained by using such well known methods. It is further noted that Hartley discloses soldering fasteners to the sheet. As to claim 6, although the admitted prior art does not specify the particular types of welding used, it is considered well known and conventional in the art to weld studs to metal sheets by resistance or drawn-arc welding. Only the expected results would be attained.

22. Claims 7, 8, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in view of Hartley as applied to claim 2 above, and further in view of Regle et al (US Patent No. 2,957,237), Hurst et al. (US Patent No. 3,574,028), and/or Futagawa (US Patent No. 4,950,347).

The admitted prior art discloses welding the stud to the sheet but does not disclose the particular apparatus for the heating of the stud. It is noted the Hartley

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discloses using a tool with a socket for heating the head portion of the stud with another tool on the opposite side of the sheet, however this tool is adapted to hold a nut which is not used in the method of the admitted prior art. Thus one of ordinary skill in the art would recognize using an appropriate tool to heat the other surface of the sheet (other than the side with the head of the stud) that holds the washer against the sheet. One of ordinary skill in the art would further recognize that the tool should provide a cavity or socket in order to hold the washer in position. For example, it is well known in the art to provide tools with cavities or sockets that conform to the shape of the articles being heated during welding. Regle shows one example of a tool 26 with a cavity 30 in order to provide the proper shape of the end article when heating metal members. Hurst discloses another example of a tool for heating articles for welding with cavities for holding the articles in position (512). Futagawa also discloses tools used in heating articles for welding where the tools for holding the articles in position are molds in the shape of the articles. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of welding fasteners and washers to metal sheets as shown by the admitted prior art and Hartley by urging the washer towards the sheet with a tool that has a face with a socket in order to hold the washer in position as is considered well known in the bonding arts and further exemplified by Regle, Hurst, and/or Futagawa particularly since Hartley discloses a similar tool for the head end of the stud.

As to claim 8, the sealing washer in the admitted prior art seals the opening after being heated and bonded to the sheet, therefore the washer is considered to be

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compressible with a thickness when uncompressed greater than the thickness when compressed. It would have been well within the purview of one of ordinary skill in the art to provide the socket in the washer holder with a depth that corresponds to the depth of the end product with the washer compressed against the sheet, only the expected results would be attained. It is noted that the tool 12 in Hartley appears to have a socket depth less than the thickness of the head that it holds.

As to claim 13, the admitted prior art does not specifically disclose the apparatus for welding, but as discussed above, it is well known in the art to heat articles for welding with tools that have electrode ends that hold each end of the articles to be welded, in particular with electrical resistance welding. See for example the electrodes in the references Hartley, Regle, Hurst, and Futagawa as discussed above. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of welding the stud and fastener to the sheet as shown in the admitted prior art and Hartley with electrodes for resistance weld heating the parts as is well known in the art and further exemplified by Hartley, Regle, Hurst, and Futagawa, only the expected results would be attained.

As to claim 14, the relationship between the fastener, sheet and washer is the same as the admitted prior art and as discussed above, the electrodes would engage the fastener and the washer as is well known in the art and exemplified by the references above. As to claim 15, as discussed above, it is well known in the art to provide tools such as electrodes for heating articles for bonding with a cavity or socket

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to receive the parts to be bonded as exemplified by the references above, only the expected results would be attained.

Allowable Subject Matter

23. Absent the finding of any additional pertinent prior art, claims 9-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

24. The following is a statement of reasons for the indication of allowable subject matter: No prior art was found to show or suggest a holder for a washer in the method as described in the claims were the holder includes a piston slidably disposed within a socket with the piston biased outwardly from the socket and urging the washer onto the sheet surface as claimed in the claimed environment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gladys J Piazza Corcoran whose telephone number is (703) 305-1271 until December 18, 2003 and (571) 272-1214 afterwards. The examiner can normally be reached on M-F 8am-5:30pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Gladys J. Piazza Corcoran
Examiner
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GJPC